

GAMING MACHINE

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is based upon and claims the benefit of priority from the prior Japanese Patent Application No. 2002-240704 filed on Aug. 21, 2002, the entire contents of which are incorporated herein by reference.

BACKGROUND OF THE INVENTION

[0002] 1. Field of the Invention

[0003] The present invention relates to a symbol combination gaming machine such as a slot machine and a pachinko comprising variable display means to varyingly display various symbols and a function to control the varying display to provide a player with a benefit based on the result, and a gaming machine system using a hall management computer to manage a gaming history.

[0004] 2. Related Art

[0005] A slot machine can be cited as a typical example of this kind of gaming machine. The slot machine has a plurality of rotating reels, each of which has a plurality of symbols provided on a periphery thereof. A prize may be obtained if a combination of symbols coincide with a predetermined combination at a stopping state after each rotating reel is stopped. For example, the same kind of symbols are lined up on a straight line. The slot machine is configured such that a predetermined amount of coins or giveaway is paid out in the event. In general, types of contingency are often involved to obtain this prize. The gaming machine is characterized by such contingency that a player cannot totally control a game result with his skill.

[0006] In order to realize the "contingency", various methods have been adopted. Recently, a control method called "pre-determination" to control the reels to stop based on the result of the lottery after carrying out a software-based prize lottery with a microcomputer is mainly adopted in the slot machine. For example, the slot machine described in Japanese Patent No. 1991-72313 is a so-called pachi-slot gaming machine with stop buttons. The pachi-slot gaming machine comprises random number sampling means to sample a random number based on the start lever operation by a player and a prize probability table separated into each random number range of "big hit," "mid hit," and "small hit" depending on the rank of each prize pattern. Then, it determines that the prize pattern is won to establish a hit (winning) flag of the relevant prize pattern if a sampled random number falls on the winning section of the prize probability table. These winning flags include the winning flag of the prize pattern called "small prize pattern" in which about ten pieces of coins are discharged by matching predetermined symbols (e.g., "bell" or "cherry") on an activated pay line, and the one called a "bonus pattern" a state to generate a prize more easily than normal gaming states during a predetermined times of gaming, to payout about 100 to 400 pieces of coins by predetermined symbols matched (e.g., "7" or "BAR" symbol).

[0007] The state of winning flag established is the one called "internal winning" in general. A related prize pattern is just allowed to be lined up on the pay line and no prize is generated actually. In order to generate a prize, rotating prize

symbols will be controlled with a timing to stop them on a pay line (normally, within four segments). This operation may be called "observation push." The term, "observation push," refers to carrying out the stopping operation by carefully observing each of the reels so as to have desirable symbols on a pay line. If this operation timing is bad, prize is not generated though the internal winning is generated. This state is called "missed winning."

[0008] This missed winning, in a large sense, may be caused by the missed observation push. The causes include some patterns. First, an aimed symbol has been determined, however, a player can not recognize varying symbols and stops reels at a rough estimate to fail. Second, there are a plurality of prize patterns that may get internal winning during the current game, and a player does not know which symbol to be stopped and fail.

[0009] In the former case, a player can improve the accuracy in some measure if he is skilled in the observation push technique. However, in the latter case, a play must understand the internal winning state which can not be seen from outside. However much a player skilled in the observation push, it is not possible to improve the accuracy of the observation push.

[0010] On the contrary, if an internal winning pattern is informed, it is possible to realize gaming states such as a bonus game in which a lot of coins can be obtained even in the ordinary gaming state. There are gaming machines having a function called "Assist Time (AT)," that reduces the occurrence of the missed winning and pays out a larger amount of coins than in the normal game without notification, by taking advantage of game property specific to pachi-slot, when predetermined conditions are met, by notifying the internal winning, further, a type of the internal winning pattern during a predetermined period. A state during AT falls into the category of the "gaming state" mentioned below. But it is possible to specify to practically pay out coins comparable to that of the bonus game.

[0011] There is also a function "Super Time (ST)" that changes the amount of coins paid out based on whether winning of "internal winning state" is supported or not. When a rotating reel is controlled to stop by the operation of a stop button by a player, a plurality of "stop tables" for determining the number of segments slipped from the symbol position at which the stop operation has been carried out are provided, a stop table is selected by a random number lottery at every time when a winning pattern is won internally. Here, being won internally refers to getting the internal winning. The stop control of the function is composed that no winning is generated, even if buttons are so pressed at the timing by the observation push that the reel should stop on the activated pay line, unless a stop operation is carried out in the order of the stop operation specified in the stop table. The function of Super Time (ST) realizes a large number of coins comparable to the bonus game as "AT function" mentioned above by assigning an "announced" state of the type of the stop table selected and an "unannounced" state of that to the selected stop table.

[0012] For example, if there are three stop buttons, one for stopping the left reel, one for stopping the middle reel, and one for stopping the right reel, the six types of operation orders of "left stop, middle stop, right stop," "left stop, right stop, middle stop," "right stop, left stop, middle stop,"